West Nile Virus
Information for Horse Owners

January 2002

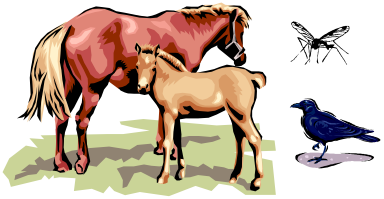
Update 1

No 5

Fact Sheet

DESCRIPTION

West Nile Virus (WNV) is an arbovirus (arthropod borne virus) spread by mosquitoes and primarily affects birds, humans and horses. Birds are the reservoir for WNV. Clinical signs of infection are highly variable and range from mild and flu-like to severe, including encephalitis and death.



HISTORY

The virus was first identified in the West Nile District of Uganda in 1937, but did not appear in the United States until the outbreak of 1999 in the Northeast. The virus has progressively moved westward affecting most states in the eastern half of the country. The disease has not been observed in California, but based on the migratory patterns of birds, there is good reason to predict that it well may appear within the next year or two.

CLINICAL DISEASE OBSERVATIONS

Not every horse exposed to WNV will develop clinical signs of disease. Of those that do, clinical signs include ataxia (stumbling, staggering, wobbly gait, or incoordination), circling, hind limb weakness, inability to stand, muscle fasciculation, paralysis or acute death. Only 1 out of 4 affected horses develops a fever. Between 20 - 40% of the horses that develop clinical signs of disease either die or are euthanized.

TESTING PROTOCOL

WNV in horses can be definitively diagnosed by testing blood, cerebral spinal fluid, or certain tissues. The California Animal Health and Food Safety laboratory provides **free** testing of suspected WNV cases in horses and ratites (ostriches, rheas, emus). Contact your veterinarian for more information. Please visit CDFA's WNV web site for more detailed information at :

http://www.cdfa.ca.gov/ahfss/ah/wnv_info.htm

SURVEILLANCE

The California Department of Health Services and the California Department of Food and Agriculture collaboratively conduct mosquito, sentinel chicken, dead bird, human, and equine surveillance programs for WNV and other related arboviruses. To report dead birds for possible WNV testing, call the Department of Health Services at (510) 540-2356.

MOSQUITO CONTROL

Reducing or eliminating your horses' exposure to mosquitoes is crucial to protecting them from WNV. Effective ways to achieve this include eliminating mosquito-breeding sites and reducing exposure to adult mosquitoes.

1) Eliminate mosquito-breeding sites by:

- Cleaning waterers, bird baths, plant saucers, etc. at least weekly
- Ridding unnecessary standing water (wheelbarrows, tires, etc.)

Animal Health and Food Safety Services

For additional information contact the Animal Health Branch at:
Phone: (916) 654-1447 Fax: (916) 653-2215
Or visit our web site at http://www.cdfa.ca.gov

CDFA™
California Department of Food and Agriculture

Redding District:	(530) 225-2140
Modesto District:	(209) 491-9350
Fresno District:	(559) 237-1843
Ontario District	(909) 947-4462
USDA-VS Area Office	(916) 857-6170 (877) 741-3690

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- Scheduling pasture irrigation to minimize standing water
- Keeping swimming pools clean and free from water on covers
- Keeping ponds aerated and/or stocked with fish
- Considering stocking water tanks with fish that consume mosquito larvae. (Local mosquito control may provide assistance)

2) Reduce exposure to adult mosquitoes by:

- Stabling horses during active mosquito feeding times (dusk / dawn)
- Utilizing screens when mosquitoes are eliminated prior to stabling
- Utilizing fans, barrier cloth, flysheets, repellents (permethrin), and insecticide misting systems as adjunctive methods of control

VACCINATION

The USDA has issued a conditional license to Fort Dodge Laboratories to market a WNV vaccine for horses in the United States. This vaccine has been approved for sale in California. The product is described by the manufacturer as a "killed, whole cell vaccine paired with Metastim adjuvant and labeled for use in healthy horses as an aid in the prevention of disease caused by WNV."

The manufacturer's recommendations call for administering a second dose 3-6 weeks after the initial dose, followed by a yearly booster. Preliminary antibody testing on vaccinated horses suggests that it may take several weeks after the second dose has been administered for a measurable antibody response to appear. A number of horses in the Southeast, where WNV is now considered to be endemic, have become ill with the disease, despite having received an initial dose of the vaccine, suggesting that one dose may not be protective. Because complete information on the effectiveness of the vaccine is not yet available, it is important to stress that WNV prevention should be mosquito control programs.

When owners are considering vaccinating for WNV, it is important to be aware that there may be future restrictions on interstate and international shipments of horses with titers to this disease. For horses engaged in international competition, this may be an important factor for consideration. Because it is important to distinguish between vaccinated and infected horses, it is important that accurate vaccination records be kept.

Should an owner decide to vaccinate, the vaccination should be timed to promote peak antibody titers to correspond with seasonal mosquito activity.

MONITORING YOUR HORSES

Owners are urged to notify their veterinarian if their horse shows neurologic signs, and veterinarians are asked to follow specific diagnostic procedures on clinically suspect horses. These procedures are detailed in the May 2001 CDFA/DHS encephalitis newsletter. These guidelines may also be obtained from the practitioner's Animal Health Branch District Office.

FREQUENTLY ASKED QUESTIONS

Question: Can my horse catch West Nile Virus from another infected horse?
Answer: No

Question: Can I catch West Nile Virus from an infected horse?
Answer: No

Question: What can I do to help protect my horse from contracting WNV?
Answer: 1) mosquito control, and 2) vaccination options